DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 74.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-008630
Date Inspected: 20-Aug-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Goodwin Steel, UK

OSM Arrival Time: 800
OSM Departure Time: 1700
Location: Stoke-on-Trent, UK

CWI Name:

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☐ Yes	☑ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Cable Band

Summary of Items Observed:

The following report is based on METS observations at Goodwin Steel Castings, Stoke-on-Trent, UK on this date.

No RT activity this date

No MT activity this date

The following tensile testing was performed by Goodwin Steel Castings Quality Control Technician, Mr. Martyn Hilditch. The testing was witnessed and completed today:

GG29421-15, Heat F7562 After PWHT

Yield Strength	466 N/mm²
Ultimate Tensile Strength	650 N/mm²
Elongation	26 %
Reduction of area	51 %

GG29426-3, Heat C8001 Initial

Yield Strength	435 N/mm²
Ultimate Tensile Strength	617 N/mm²
Elongation	26 %
Reduction of area	57 %

GG29421-18, Heat C8003 After PWHT

Yield Strength	413 N/mm²
Ultimate Tensile Strength	612 N/mm²
Elongation	30 %
Reduction of area	50 %

GG29420-10, Heat F7518 After PWHT

Yield Strength	350 N/mm²
Ultimate Tensile Strength	567 N/mm²
Elongation	31 %
Reduction of area	58 %

GG29420-16, Heat F7530 After PWHT

Yield Strength	410 N/mm²
Ultimate Tensile Strength	624 N/mm²
Elongation	27 %
Reduction of area	54 %

GG29420-13, Heat F7520 After PWHT

Yield Strength	412 N/mm²
Ultimate Tensile Strength	669 N/mm²
Elongation	26 %
Reduction of area	51 %

GG29421-16, Heat F7568 After PWHT

Yield Strength	427 N/mm²
Ultimate Tensile Strength	632N/mm²
Elongation	30 %
Reduction of area	53 %

GG29433-2, Heat C8014 Initial

Yield Strength	445 N/mm²
Ultimate Tensile Strength	626 N/mm²
Elongation	24 %
Reduction of area	51 %

GG29420-7, Heat C7975 After PWHT

Yield Strength	370 N/mm²
Ultimate Tensile Strength	602 N/mm²
Elongation	26 %
Reduction of area	43 %

GG29451-2, Heat F7637 Initial

Yield Strength	396 N/mm²

Ultimate Tensile Strength	796 N/mm²
Elongation	23 %
Reduction of area	37 %

GG29421-17, Heat C7998 After PWHT

Yield Strength	442 N/mm²
Ultimate Tensile Strength	630 N/mm²
Elongation	27 %
Reduction of area	53 %

QA inspector witnessed welding of a through wall excavation in casting B11-2-F(1), GG29443-1. The welder, Terry Knall, was observed welding in the flat and horizontal positions utilizing approved welding procedure WPS04-0120F4C. He was observed using 100 to 108 amps as shown on the calibrated ammeter on the welding power supply. Electrode being used was 3.2 mm WB E7018-1 batch no. 2071023. Parameters were observed to be within the limits of the WPS. The weld was not completed this date. The casting will be repositioned prior to completion of the weld to allow the remainder of this weld to be welded in the flat position.

The QA Inspector reviewed standards and specifications in preparation for inspection at Bodycote (heat treatment of cable band bolts) and Caparo (CTT Ductile), the test laboratory performing reduced section tensile testing of the cable band bolts.

The QA Inspector verified of Material On Hand (MOH) Dated 8/12/09 as submitted for invoice. Review concentrated on visual verification of the castings located at Goodwin Steel Castings (foundry) and review of Certificates of conformance for those castings located at Goodwin International (machine shop). A form TL-6049 was completed.

Item	Description	WBS	Dwg No.	Status
1	Cable Band Casting B11-2-F(1) Weld repair in progress			

Summary of Conversations:

Chris Ryder, Quality Representative, Goodwin International reports that the baskets to be used by the Bodycote are not large enough to process 45 bolts. The baskets will only hold 44 bolts. He reported that the baskets are being modified to hold 45 bolts as planned. This has caused a delay in processing the first batch of bolts. The visit to

Bodycote is rescheduled for tomorrow Friday 21 August, 2009.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Riegler,Randy	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer